

## Department of Chemistry - Youngstown State University

<b>CHEM 5821</b>	Fall Semester 2020 – T, Th – 3:00 - 4:15 PM - Ward Beecher 6030 Lectures will be Live via Webex, Exams will be In-Person in Room 6030.
<b>Professor</b>	Dr. John Jackson - Room 5022, W.B.H., (330) 941-1551. e-mail: <a href="mailto:jajackson@ysu.edu">jajackson@ysu.edu</a>
<b>Office Hours</b>	M, W: 2:00-4:00 PM; F: 2-3 PM. Office hours will be conducted exclusively online via Webex and by email. I will answer the Webex requests in the order they are received.
<b>Text Book</b>	"Organic Chemistry: an Intermediate Text, 2 <sup>nd</sup> Ed." Robert V. Hoffman Pub: John Wiley & Sons, Inc.; ISBN 0-471-45024-3
<b>Class Web Site</b>	<a href="http://jajackson.people.ysu.edu/CHEM5821/index.html">http://jajackson.people.ysu.edu/CHEM5821/index.html</a>

### CHEM 5821 Intermediate Organic Chemistry 3 s.h. CRN: 41409

An intermediate treatment of organic chemistry building on the principles introduced at the sophomore level. Emphasis on curved arrow notation in mechanism and the planning of organic syntheses. Structural analysis of organic compounds using NMR, IR and MS and the application of structural knowledge to questions of mechanism.

Prereq.: CHEM 3720.

**Course Objectives:** This course is intended not only for Chemistry Majors, but *any* student who will use or apply the basic concepts of Organic Chemistry in later education (graduate school, medical school, etc.), or in a science related profession (chemistry, biochemistry, biology, etc.). This course will bridge the gap between what a student saw in the standard one year sophomore Organic Chemistry sequence and what is typically covered in an advanced graduate level course. The material will range from a review of some of the fundamental concepts of Organic Chemistry, to an in depth treatment of some of the more modern aspects of Organic Chemistry. The goal of this course is to help the student recognize the relationship between the basic principles of Organic Chemistry, and how they are applied in more advanced situations.

### Course Outline

<u>Week</u>	<u>Chapters</u>	<u>Title</u>	<u>Homework Problems</u>
1	1	Functional Groups and Chemical Bonding.	1, 2, 3, 4, 5, 6, 7.
1-2	2	Oxidation Levels of Organic Compounds.	1, 2.
2-3	3	Acidity and Basicity.	1, 2, 3, 4.
3-4	4	Curved Arrow Notation.	1, 2, 3.
5-6	6	Stereochemistry and Conformation.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13.
7-8	7	Functional Group Synthesis.	1, 2.
9	8	Carbon-Carbon Bond Formation Between Carbon Nucleophiles and Carbon Electrophiles.	1, 2, 3.
10	9	Carbon-Carbon Bond Formation by Nonpolar Reactions: Free Radicals and Cycloadditions.	1, 2, 3, 4.
11-12	10	Planning Organic Syntheses.	1, 2, 3.
13	5	Mechanisms of Organic Reactions.	1, 2, 3, 4, 8, 11, 12.
14-15	11	Structure Determination of Organic Compounds.	1, 2, 3, 4, 5, 6, 7.

***Last Day for Withdrawing with a Grade of 'W', Thursday, October 22, 2020.***

**Exams and Grading:** There will be three exams worth 100 points each and a comprehensive final exam worth 200 points. The lowest score on the three exams will be dropped for a course total of 400 points.

The exams will be on the following days: **Exam 1** - Thursday, September 17, 2020; **Exam 2** - Thursday, October 22, 2020; **Exam 3** – Tuesday, December 1, 2020; **Final Exam** – 3:15-5:15 PM, Thursday, December 10, 2020. These will be In-Person exams in room 6030 Ward Beecher Hall. Photo ID Required.

Letter grades will be assigned by the following:

**A** (400 - 350 pts.); **B** (349 - 300 pts.); **C** (299 -225 pts.); **D** (225-160 pts.); **F** below 160.

**Attendance:** Attendance at lecture is mandatory. Students will be held responsible for any information, material, and announcements made in lecture.

**Homework:** Successful completion of these problems will greatly raise your performance on the exams. The assigned problems WILL NOT be counted in your overall point total.

**Makeup Exams:** The responsibility for work missed during absence rests with the student. The instructor has no obligation to give make-up graded coursework or to review other class work missed by a student as a result of absence except under those specific conditions cited below:

1. Participation in University-sponsored activities. University-sponsored activities are those that are scheduled by academic, student affairs, and athletic units. They include, but are not limited to: intercollegiate athletic competitions activities approved by academic units, including artistic performances; R.O.T.C. functions; academic field trips; professional conferences; and special events connected with coursework.
2. Government-required activities, such as military assignments, jury duty, or court appearances.
3. Religious observances that prevent the student from attending class.
4. Death of an immediate family member, including father, mother, sister, brother, spouse, children, step-children, step-parent, parent-in-laws, sons-in-law, daughters-in-law, brothers-in-law, sisters-in-law, grandparents, foster parents, foster children, legal guardians, any person who stands in the place of a parent (loco parentis), or a domestic partner.
5. Documented personal illness.

**Incomplete Grade:** An incomplete grade of **I** may be given to a student who has been doing satisfactory work in a course but, for reasons beyond the control of the student and deemed justifiable by the instructor, had not completed all requirements for a course when grades were submitted.

<https://catalog.ysu.edu/undergraduate/general-information/academic-policies-procedures/grading-system/>

**Academic Honesty:** Academic honesty is essential to the educational process and serves to protect the integrity of the University community. Therefore, all members of the University community have a responsibility of maintaining high standards of honesty and ethical practice. Students should consult with a faculty member if they are not sure what may constitute academic dishonesty. Students suspected of academic dishonesty may be charged with a violation of University conduct regulations under Article III. 1. of the Student Code of Conduct.

<https://catalog.ysu.edu/undergraduate/general-information/academic-policies-procedures/academic-misconduct/>

**Disability Services.** In accordance with University procedures, if you have a documented disability and require accommodations to obtain equal access in this course please contact me privately to discuss your specific needs. You must be registered with the CSP/Disability Services, located at Kilcawley Center – RM 2082, and provide a letter of accommodation to verify your eligibility. You can reach the CSP/Disability Services at 330-941-1372. <http://www.yсу.edu/csp/disabilityservices/>

**Accessibility:** Youngstown State University does not discriminate on the basis of race, color, national origin, sex, sexual orientation, gender identity and/or expression, disability, age, religion or veteran/military status in its programs or activities. Please visit [www.yсу.edu/ada-accessibility](http://www.yсу.edu/ada-accessibility) for contact information for persons designated to handle questions about this policy.

## **YSU Mandatory COVID 19 STATEMENT**

The following policy applies and shall be enforced during the current coronavirus pandemic as recognized by the State of Ohio. As a consequence of the current coronavirus pandemic, students are expected to abide by all safety and health policies implemented by the University's Office of Environmental Occupational Health and Safety as well as all applicable local, state, and federal mandates. Currently, the City of Youngstown and the State of Ohio mandates a face covering/mask in public spaces. Consistent with federal, state and local guidelines, University Health Guidelines require that all individuals within campus buildings, including students, properly wear face coverings except when working alone within an enclosed area. Face coverings are in addition to maintaining appropriate social distancing when possible. Exceptions to wearing a face covering in a classroom or laboratory must be for justifiable reasons as approved by the Office of Disability Services (<https://ysu.edu/center-for-student-progress/disability-services>). Repeated violations of any coronavirus safety and health policy shall be handled in accord with The Student Code of Conduct (<https://ysu.edu/student-conduct/code-conduct>).

**Contingency Plans for the Switch to all Online Courses.** As the lectures for CHEM 5821 will be Online Live only, the only change will be to having Online Exams. Online exams will be administered through Blackboard, and will be proctored using Examity.

**Assigned Seating During In-Person Exams.** Room 6030 Ward Beecher Hall has a total of 70 desks, half of the desks are numbered, half of the desks have "Do Not Sit Here" signs. The safe seating capacity with 6 feet or more of separation in Room 6030 is 20 students. Assigned seats will be determined one week prior to each exam. The seating configuration of Room 6030 is subject to change by the Administration without notice.

**Exams.** Your exams will be color photocopied (both sides). The original exam will sit in a folder in my office until the end of the semester and then be shredded. The photocopy will be graded. The graded exam will be mailed by YSU to the address you print on the cover page of the exam. Further exam protocols will be developed as needed.

**Travel and Return to Campus:** Students, employees and others returning to Ohio after travel to states reporting positive COVID-19 test rates of 15 percent or higher must stay home and self-quarantine for 14 days. The list of hot spot states is available on the Ohio Department of Health website and is updated every Wednesday. It is the responsibility of the person traveling to determine upon their return if their destination is on the hot spot list. If you have traveled internationally, you must stay home and self-quarantine for 14 days.